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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,899

01/29/2004

Masanori Amano

032111

2604

38834

7590

08/04/2008

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EXAMINER

SIMONE, CATHERINE A

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

08/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/765,899

Applicant(s)

AMANO ET AL.

Examiner

Catherine Simone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 5/23/2008 has been entered.

Withdrawn Rejections

2. The 35 U.S.C. 103(a) rejection of claims 1-4 over Hasegawa et al. in view of Amano et al. of record in the Examiner Answer mailed 6/22/2007 has been withdrawn due to the Applicants' amendment filed 5/23/2008.

Election/Restrictions

3. Newly submitted claims 5-12 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Inventions I (claims 1-4) and II (new claims 5-12) are related as product and process of use, and the process for using the product as claimed in Invention II can be practiced with another materially different product without the specifics of the Invention I product, i.e. said pitch of said printing convex portions is

substantially equal to a width of one pixel printed on the printing object. See MPEP § 806.05(h).

Thus, the inventions are deemed patentably distinct.

4. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 5-12 stand withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The recitation “wherein said pitch of said printing convex portions is *substantially equal* to a width of one pixel printed on the printing object” in claims 1 and 3 is deemed new matter. The specification only has support for what is on page 6, lines 15-18. Specifically, Applicants have support for the pitch of the printing convex portions matching the width of one pixel. There is no support provided in the specification for the pitch of the printing convex portions being *substantially equal* to a width of one pixel, as now recited in claims 1 and 3. The Specification,

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as originally filed, does not provide support for this new limitation. Thus, this new limitation is deemed new matter.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2002/0047560 A1) in view of Amano et al. (JP 2002-293049; refer to the translation of record).

Regarding claims 1 and 2, Lee et al. teach a layer forming relief for transferring and printing an application fluid such as an organic luminous substance (paragraph 0008) applied on printing convex portions on a printing object, the layer forming relief comprising the printing convex portions formed as linear strips and aligned to be parallel with each other with a pitch (Figs. 4, 6A, 6B, 9B and 11B, strips/lands 12; paragraph 0028), and a plurality of micro-projections on top faces of each of the printing convex portions (Figs. 6A, 9B and 11B, areas between indentations 12a) and grooves (Figs. 6A, 9B and 11B, indentations 12a) between adjoining micro-projections for retaining the application fluid (paragraph 0028), wherein the pitch of the printing convex portions (Figs. 9B, 9C, 11B and 11C, convex portions 12) is deemed to be substantially equal to a width of one pixel printed on the printing object (see Figures 8-11; and paragraphs 0035-0039).

However, Lee et al. fail to teach the micro-projections being formed into a truncated cone or in a cylinder. Additionally, Lee et al. fails to teach the height of the micro-projections being in the range of 2 to 50 μm , the space between adjoining micro-projections being 7 μm or more, the diameter of the top face of the micro-projections being 5 μm or more, and the number of micro-projections being in the range of 2 to 30.

Amano et al. teach that it is well known in the art to have a layer forming relief including micro-projections formed of a truncated cone or cylinder shape (see paragraph 0010, lines 1-2), and further the height of the micro-projections being in the range of 2 to 50 μm (see paragraph 0019, lines 9-10), the space between adjoining micro-projections being 7 μm or more (see paragraph 0019, lines 7-9), the diameter of the top face of the micro-projections being 5 μm or more (see paragraph 0020), and the number of micro-projections being in the range of 2 to 30 (see paragraph 0017) for the purpose of preventing the occurrence of a marginal phenomenon and ensuring formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object.

The micro-projections (areas between indentations 12a) in Lee et al. are analogous to the micro-projections in Amano et al., since they both are being used for transferring and printing a liquid applied thereon onto a printing object.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the micro-projections of the convex portions in Lee et al. to be in the form of a truncated cone or a cylinder shape and have the height of the micro-projections be in the range of 2 to 50 μm , the space between adjoining micro-projections be 7 μm or more, the diameter of the top face of the micro-projections be 5 μm or more, and the

number of micro-projections be in the range of 2 to 30 as suggested by Amano et al. in order prevent the occurrence of a marginal phenomenon and ensure formation of an orientation film having an even thickness when printing and transferring a coating liquid onto an object.

9. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2002/0047560 A1) in view of Komura (JP 2003-029271; refer to the computer translation copy).

Regarding claims 3 and 4, Lee et al. teach a layer forming relief for transferring and printing an application fluid such as an organic luminous substance (paragraph 0008) applied on printing convex portions on a printing object, the layer forming relief comprising the printing convex portions formed as linear strips and aligned to be parallel with each other with a pitch (Figs. 4, 6A, 6B, 9B and 11B, strips/lands 12; paragraph 0028), and a plurality of micro-projections on top faces of each of the printing convex portions (Figs. 6A, 9B and 11B, areas between indentations 12a) and grooves (Figs. 6A, 9B and 11B, indentations 12a) between adjoining micro-projections for retaining the application fluid (paragraph 0028), wherein the pitch of the printing convex portions (Figs. 9B, 9C, 11B and 11C, convex portions 12) is deemed to be substantially equal to a width of one pixel printed on the printing object (see Figures 8-11; and paragraphs 0035-0039).

However, Lee et al. fail to specifically teach projected micro-strips on the top faces of the convex portions wherein a cross section of the projected micro-strips in a direction perpendicular to a longitudinal direction is trapezoidal or rectangular, and the height of the projected micro-strips being in the range of 2 to 55 μm , the space between adjoining projected

micro-stripes being 7 μm or more, the width of the top face of the projected micro-stripes being 3.5 μm or more, and the number of the projected micro-stripes being in the range of 2 to 33.

Komura teaches a layer forming relief including projected micro-stripes on the top faces of each linear relief part and grooves between adjoining micro-stripes wherein a cross section of the projected micro-stripes in a direction perpendicular to a longitudinal direction is trapezoidal (Drawing 3), and the height of the projected micro-stripes is in the range of 2 to 55 μm (paragraph 0012), the space between adjoining projected micro-stripes is 7 μm or more (paragraph 0018), the width of the top face of the projected micro-stripes is 3.5 μm or more (paragraph 0018), and the number of the projected micro-stripes is in the range of 2 to 33 (Drawings 3, 6 and 7) for the purpose of transferring a large amount of sealing agent and for preventing a place with no sealing agent transferred from being generated and making an edge of a transferred sealing agent to be sharp (see abstract).

The relief structures provided on the linear convex portions in both Lee et al. and Komura are analogous, since both are being provided for printing and transferring an application fluid onto a printing object.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the top faces of the convex portions in Lee et al. to have a plurality of projected micro-stripes with grooves therebetween, wherein the cross-section of the projected micro-stripes in a direction perpendicular to a longitudinal direction is trapezoidal, and the height of the projected micro-stripes is in the range of 2 to 55 μm , the space between adjoining projected micro-stripes is 7 μm or more, the width of the top face of the projected micro-stripes is 3.5 μm or more, and the number of the projected micro-stripes is in the range of 2 to 33 as

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suggested by Komura in order to transfer a large amount of solution and for preventing a place with no solution transferred from being generated and making an edge of a transferred solution to be sharp.

Response to Arguments

10. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new grounds of rejection, which are presented above.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571) 272-1501. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Catherine Simone/
Examiner, Art Unit 1794

July 24, 2008

/KEITH D. HENDRICKS/
Supervisory Patent Examiner, Art Unit 1794